

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of

Atty. Docket: NL 021259

GILLIAN ANTOINETTE MIMNAGH-KELLEHER ET AL.

Confirmation No. 8406

Serial No. 10/537,877

Group Art Unit: 2856

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Examiner: SHAH, SAMIR M.

Title: ACTIVITY MONITORING

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Board of Patent Appeals and Interferences

United States Patent and Trademark Office

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APPELLANTS' REPLY BRIEF

Sir:

In response to the Examiner's Answers mailed on March 19,

2008, please consider the following remarks:

REMARKS

Appellants maintain the arguments submitted in the Appeal Brief filed on February 15, 2008, the Supplemental Brief filed on March 3, 2008, and the Supplemental Brief filed on February 16, 2009, which are incorporated herein by reference. Further, Appellants refute the allegations made in the Examiner's Answer of March 19, 2009.

For example, on page 11, lines 11-15 of the Examiner's Answer of March 19, 2009, it is alleged that:

the Appellant's interpretation of, "taking a magnitude of the resultant values" as calculating/determining a magnitude of the resultant values appears to be incorrect. The Examiner interprets, "taking a magnitude" as using/reading a magnitude from the look-up table and not as calculating/determining a magnitude." (Emphasis added)

It is respectfully submitted that the Examiner's interpretation of "taking a magnitude" (recited on column 7, line 28 of Nikolic) as using/reading a magnitude from the look-up table and not as calculating/determining a magnitude," is misplaced, and can only be arrived to using impermissible hindsight.

It is respectfully submitted that one skilled in the art can only arrive to a single conclusion from column 7, lines 22-31 of

Nikolic, which is the ONLY place a look-up table is mentioned in Nikolic, where column 7, lines 12-31 specifically recite:

Referring now to FIG. 3, a flow chart is provided to illustrate an embodiment of the overall system logic of monitoring device 200. In step 305, the output of the accelerometer or activity monitor is obtained. The acceleration output information can be read as an analog voltage, or can be read digitally using a Pulse Width Modulated (PWM) output. In the embodiment of FIG. 3, the acceleration output information is read as an analog voltage and includes acceleration information from two orthogonal axes.

In step 310 the acceleration output or data for each axis is added to a cumulative sum for the corresponding axis. The acceleration data is compared to the minimum and maximum values of the information obtained in step 305. If the data point is a new minimum or maximum, the data point is saved on storage device 250 of FIG. 2. By way of example, this can be done by employing a look-up table in ROM and taking the magnitude of the resultant values, or alternatively by designating one axis to determine the maximum and minimum data points. (Emphasis added)

Based on the above portion of Nikolic, as well as the remainder of Nikolic, one skilled in the art would understand that, in step 305, acceleration output information are obtained that include acceleration information from two orthogonal axes. From the obtained acceleration output information, minimum and maximum values are saved in the on storage device 250. It is these minimum and maximum values that are determined "by employing a look-up

table in ROM and taking the magnitude of the resultant values." (Column 7, lines 28-29; emphasis added) That is, the look-up table is used to obtain the minimum and maximum values. Once the minimum or maximum values are determined (using the look-up table), then the magnitude of the resultant values of the minimum or maximum values are taken.

The look-up table includes raw data from the accelerometer in two orthogonal axes. This raw data is in ONE form, either in vector form or in magnitude form. Assuming, arguendo, that the raw accelerometer data is in magnitude form, and is simply read from the look-up table, there is still no disclosure or suggestion in Nikolic of a look-up table of "stored magnitudes and associated vector components," as recited in independent claim 26 and 31. Rather, at best, the Nikolic look-up table stores either magnitudes or vector component values for the minimum or maximum magnitudes or the minimum or maximum vector component values.

Processing sensor signals as vector components of a vector to produce a magnitude of the vector using a lookup table of stored magnitudes and associated vector components, as recited in independent claim 26 and 31, are nowhere disclosed or suggested in

Nikolic, Hutchings and Jacobsen.

Rather, Nikolic merely recites to take, or allegedly 'read', values from a look-up table that includes either magnitudes or vector component values, but NOT BOTH. Further, Nikolic specifically recites calculating "the dynamic acceleration magnitude ... through the use of ... equations," as specifically recited on column 18, lines 9-11, and similarly recited on column 12, lines 43-47, which specifically recites that the "magnitude can be calculated through the use of the following equations." (Emphasis added)

Why would Nikolic calculate magnitudes, if such magnitudes are already stored along with associated vector components in a look-up table? The Nikolic look-up table simply does NOT store magnitudes and associated vector components. At best, the Nikolic look-up table stores either minimum (or maximum) magnitudes or vector component values.

On page 12, lines 4-5 of the Examiner's Answer of March 19, 2009, the Examiner correctly notes that Nikolic uses "equations" to produce a magnitude of each vector:

Nikolic's processor uses the data that has been

stored in the lookup table and uses "equations" to produce a magnitude of each vector. (Emphasis added)

However, it is alleged that the same is "required by the claims." (Examiner's Answer of March 19, 2009, page 11, line 6)

The Examiner's Answer continues to allege that:

Nowhere is the claims are "equations" excluded.
How the data in the lookup table is used is not limited by the claims. (Emphasis added)

Appellants agree that the claims do not explicitly exclude "equations" however, strongly disagree with the further allegations. In particular, independent claims 26 and 31 specifically recite:

a processor configured to receive the sensor signals from the measurement unit, and to process the sensor signals as vector components of a vector to produce a magnitude of the vector using a lookup table of stored magnitudes and associated vector components.

That is, claims 26 and 31 specifically recite that the lookup table includes "stored magnitudes." A lookup table that includes "stored magnitudes," (as well as "associated vector components,") is nowhere disclosed or suggested in Nikolic. Rather, Nikolic calculates the magnitudes using equations and data stored in the Nikolic lookup table. If the Nikolic lookup table included "stored

magnitudes and associated vector components," then there would be no need to use any equations to calculate what is already in the lookup table. Clearly, no such magnitudes and associated vector components are stored in the Nikolic lookup table.

Further, column 23, lines 6-8 of U.S. Patent No. 6,452,961 (Van Wechel), recited in the last paragraph of the Advisory Action of December 11, 2007, and page 12, last paragraph of the Examiner's Answer of March 19, 2009, merely recites that other "methods for computing or approximating the magnitude of a vector include the use of lookup table." It is respectfully submitted that this recitation of Van Wechel is completely silent about how the lookup table is used or what is stored in the lookup table, and does not inherently teach that the look-up table includes both "magnitudes and associated vector components," as recited in independent claims 26 and 31.

There is no disclosure, suggestion or apparent reason in the prior art, absent the benefit of impermissible hindsight using the present application as a road map, for one skilled in the art to understand that a look-up table stores both magnitudes and associated vector components, as recited in independent claim 26

and 31.

Accordingly, it is respectfully submitted that independent claims 26 and 31 are allowable, and allowance thereof is respectfully requested. In addition, it is respectfully submitted that claims 27-30 and 32-35 should also be allowed at least based on their dependence from independent claims 26 and 31.


In addition, Appellants deny any statement, position or averment of the Examiner that is not specifically addressed by the foregoing argument and response. Any rejections and/or points of argument not addressed would appear to be moot in view of the presented remarks. However, the Appellants reserve the right to submit further arguments in support of the above stated position, should that become necessary. No arguments are waived and none of the Examiner's statements are conceded.

CONCLUSION

Claims 26-35 are patentable over Nikolic, Hutchings and Jacobsen.

In view of the above, it is respectfully submitted that the Examiner's rejection of claims 26-35 should be reversed.

Respectfully submitted,

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